

**Defense Information Infrastructure (DII)**  
**Common Operating Environment (COE)**

**Installation Procedures (IP) for**  
**Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1)**

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# 1. Scope

## 1.1 Identification

This document describes how to install the Defense Information Infrastructure (DII) Common Operating Environment (COE) Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1). The DII COE Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1) is intended to be used on Sun hardware running the Solaris 2.5.1 Operating System.

The Defense Information Infrastructure (DII) Common Operating Environment (COE) kernel is a Government off-the-shelf (GOTS) package that includes both GOTS and Commercial off-the-shelf (COTS) software, as described in Section 1.2, *System Overview*.

**NOTE:** Throughout this document, *Courier* font is used to indicate entries to be typed at the keyboard, UNIX commands, file and directory names, and screen text. For example:

The file is located in the `DII_DEV` directory.

## 1.2 System Overview

The DII COE will normally make available a large number of segments, not all of which are required for every application. The DII COE kernel is the minimum set of software required on every workstation regardless of how the workstation will be used. These components include the operating system and windowing services, as well as external environment interfaces. The DII COE kernel for Solaris 2.5.1 includes the following components:

- C Operating System (installed before the DII COE kernel)
- C System Administration function
- C Security Administration function
- C Runtime tools
- C COTS software (windowing environment)
- C GOTS software.

These components can be broken down into the following features:

### **Operating System**

Solaris 2.5.1 Operating System, including Solaris Common Desktop Environment (CDE). Refer to the *DII COE Kernel Installation Guide (Solaris 2.5.1)* for information about installing the Solaris 2.5.1 Operating System.

### **System Administration Function**

The System Administration function is used to provide the capability to configure, manage, and use printer services from a DII workstation; close windows; reboot or shut down the system, mount file systems, and format hard drives; load or install segments, including distributions; and change machine ID, set system time, configure a workstation as either a DNS client or a server, set routing configuration, and configure Network Information Service (NIS). The system administrator's account group sets the system administrator's environment to execute the functions listed above. Refer to the *DII COE System Administrator's Guide (Solaris 2.5.1)* for more information about system administration functionality.

### **Security Administration Function**

The Security Manager Administration function provides the ability for authorized users to create, delete, and maintain user accounts and UNIX groups, as well as to define *profiles*, which provide users with easy access to the executables and icons they need to perform their duties. (Profiles provide a mechanism by which a security administrator can group sets of users, often by their job responsibilities, to appropriate applications.) Refer to the *DII Security Manager Administrator's Guide* for more information about security administration functionality. In addition, the Security Manager Administration function provides the ability to monitor and manage the growth of the audit log files, which record user access (e.g., logging in, logging out) to the system.

### **Runtime Tools**

Runtime tools are used to support the segment installation process. The following runtime tools are included on the DII COE Kernel Version 3.2.0.0 Patch 2 tape. All of the tools can be run from the command line, and some can be run from other code using published Application Programmer Interfaces (APIs). The COEInstaller tool can also be run from the System Administration pull-down menu. Refer to the *DII COE Programmer's Manual (Solaris 2.5.1)* and the *DII COE API Reference Guide (Solaris 2.5.1)* for more information about these tools and their functionality.

- C **COEAskUser** Version 1.0.0.9—Displays a message to the user and expects the user to choose one of two buttons in response. The COEAskUser tool can be called from anywhere.
- C **COEFindSeg** Version 1.0.0.8—Returns information about a requested segment.
- C **COEInstaller** Version 1.0.0.12—Displays a list of segments that may be installed from tape, disk, or other electronic media. The COEInstaller tool can be run from the command line, as well as from the System Administration pull-down menu.

- C **COEInstError** Version 1.0.0.9—Displays an error message to the user. It can be run from the command line, but it is most often called from within a `PreInstall`, `PostInstall`, or `DEINSTALL` script.
- C **COEMsg** Version 1.0.0.9—Displays a message to the user from within a `PreInstall`, `PostInstall`, or `DEINSTALL` script.
- C **COEPrompt** Version 1.0.0.9—Displays a message to the user and expects the user to enter a response from within a `PreInstall`, `PostInstall`, or `DEINSTALL` script.
- C **COEPromptPasswd** Version 1.0.0.9—Displays a message to the user and waits for the user to enter a password. It can be run from the command line, but it is most often called from within a `PreInstall` or `PostInstall` script.
- C **COEUpdateHome** Version 1.0.0.6—Updates the home environment within a script file to point to where a segment actually was installed.

### COTS Software

The following COTS software helps to provide the foundation of the DII COE software environment:

- C Common Desktop Environment (CDE)
- C Motif Version 1.2.6
- C X Windows Version X11R6

### GOTS Software

The following GOTS software also helps to provide the foundation of the DII COE software environment. Refer to the *DII COE System Administrator's Guide (Solaris 2.5.1)* and the *DII COE Security Manager's Guide (Solaris 2.5.1)* for more information about GOTS software.

- C **CSELCK (Deadman)** Version 1.0.0.2 is used to provide a screen lock capability as a security feature.
- C **CSECON (Console Window)** Version 1.0.0.2 is used to provide a secure console window for displaying output written to `stdout`.
- C **CSEXDM (X Display Manager)** Version 1.1.0.2 provides a secure login screen.
- C **CSEPAS (Password)** Version 1.0.0.2 allows a user to change his or her own password and allows the security administrator to change other users' passwords.
- C **Accounts and Profiles Subsystem** is used to add, modify, and delete local and global user accounts, profiles, and groups.

To receive immediate assistance with a problem or to report a problem, call the DII COE Hotline at (703) 735-8681 (DSN 653-8681) between the hours of 9:00 a.m. and 5:00 p.m. Eastern Standard Time. You can also send a facsimile to (703) 735-3080 (DSN 653-3080), send an e-mail message to [hotlinec@ncr.disa.mil](mailto:hotlinec@ncr.disa.mil), or look on the DII COE Hotline web site at the following URL: <http://spider.osfl.disa.mil/dii/hotline/index.html>. The DII COE Hotline is located at the Operational Support Facility (OSF) in Sterling, Virginia.

If a problem cannot be corrected, follow these guidelines to report it:

**STEP 1: Make sure the problem can be repeated.**

**STEP 2: Record pertinent information.** Record the problem, the last steps leading to the problem, and the frequency with which the problem occurs.

**STEP 3: Describe attempts to solve the problem.**

## 2. Referenced Documents

The following documents are referenced in this installation guide:

- C DII.3200.Sol251.PM-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Programmer's Manual (HP-UX 10.20/Solaris 2.5.1)*, July 25, 1997
- C DII.3200.Sol251.Kernel.IG-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Kernel Version 3.2.0.0 Patch 1 and Developer's Toolkit Version 3.2.0.1 Installation Guide (Solaris 2.5.1)*, September 26, 1997
- C DII.3200.Sol251.AG-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 System Administrator's Guide for the Kernel Patch 1 (Solaris 2.5.1)*, September 26, 1997
- C DII.3200.Sol251.SMG-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Security Manager's Guide (Solaris 2.5.1)*, July 25, 1997
- C DII.3200.Sol251.RG-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Application Programmer Interface (API) Reference Guide (Solaris 2.5.1)*, July 25, 1997
- C DII.3200.Sol251.Kernel.SVD-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Version Description for Kernel Patch 2 Version 3.2.0.0P2 (Solaris 2.5.1)*, November 18, 1997
- C *SPARC®: Installing Solaris Software*, Sun Microsystems, Incorporated, Mountain View, CA, November 1995



- C *Software and AnswerBook® Installation Guide*, Sun Microsystems, Incorporated, Mountain View, CA, November 1995.

### **3. System Environment**

This section describes the system requirements and the system and site preparations.

#### **3.1 System Requirements**

This section describes hardware, operating system, and kernel requirements for the DII COE Kernel 3.2.0.0 Patch 2.

##### **3.1.1 Hardware Requirements**

The following hardware components are required for the DII COE Kernel 3.2.0.0 Patch 2:

- C 49 megabytes (MB) disk space
- C 11 MB Random Access Memory (RAM)
- C 8 millimeter (mm) tape drive.

##### **3.1.2 Operating System Requirements**

The DII COE Kernel 3.2.0.0 Patch 2 requires the Solaris 2.5.1 Operating System.

##### **3.1.3 Kernel Requirements**

The DII COE Kernel 3.2.0.0 Patch 2 (Solaris 2.5.1) requires the DII COE Kernel Version 3.2.0.0 (Solaris 2.5.1). The DII COE Kernel is a suite of applications layered on top of the Solaris 2.5.1 Operating System.

### **3.2 System and Site Preparations**

This section describes the system configuration, operating system preparation, and the tape/disk preparation.

#### **3.2.1 System Configuration**

The DII COE Kernel 3.2.0.0 Patch 2 (Solaris 2.5.1) tape is a patch segment and must be installed after the Solaris 2.5.1 Operating System and the DII COE Version 3.2.0.0 Kernel. Refer to the *DII COE Kernel Installation Guide (Solaris 2.5.1)* for instructions on installing the Solaris 2.5.1 Operating System and the DII COE Kernel.

### 3.2.2 Operating System Preparation

Information needed to prepare the operating system is described in the following documents:

- C *SPARC®: Installing Solaris Software*, Sun Microsystems, Incorporated, Mountain View, CA, November 1995
- C *Software and AnswerBook® Installation Guide*, Sun Microsystems, Incorporated, Mountain View, CA, November 1995.

### 3.2.3 Tape/Disk Preparation

One 8 mm tape containing the DII COE Kernel 3.2.0.0 Patch 2 (Solaris 2.5.1) is required. Ensure that the disk has enough space to install the Kernel 3.2.0.0 Patch 2, which is 49 MB.

## 4. Installation Instructions

This section describes the media booting procedures, the installation procedures, installation of upgrades, installation verification, initializing the software, list of changes and enhancements, and important considerations.

### 4.1 Media Booting Procedures

Not applicable.

### 4.2 Installation Procedures

Follow the steps below to install the DII COE Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1) segment. Refer to the *DII COE System Administrator's Guide (Solaris 2.5.1)* for more information about installing segments.

- STEP 1:      **Load the patch tape.** Load the patch tape into a tape drive.
- STEP 2:      **Log in as system administrator.** In the DII COE login screen, type `sysadmin` at the Name prompt and press [RETURN].
- STEP 3:      **Enter the `sysadmin` password.** Type the `sysadmin` password at the Password prompt and press [RETURN]. The System Administration software appears.

**STEP 4: Select the segment Installer option.** Select the Segment Installer option from the Software pull-down menu. The Installer window appears (Figure 1).

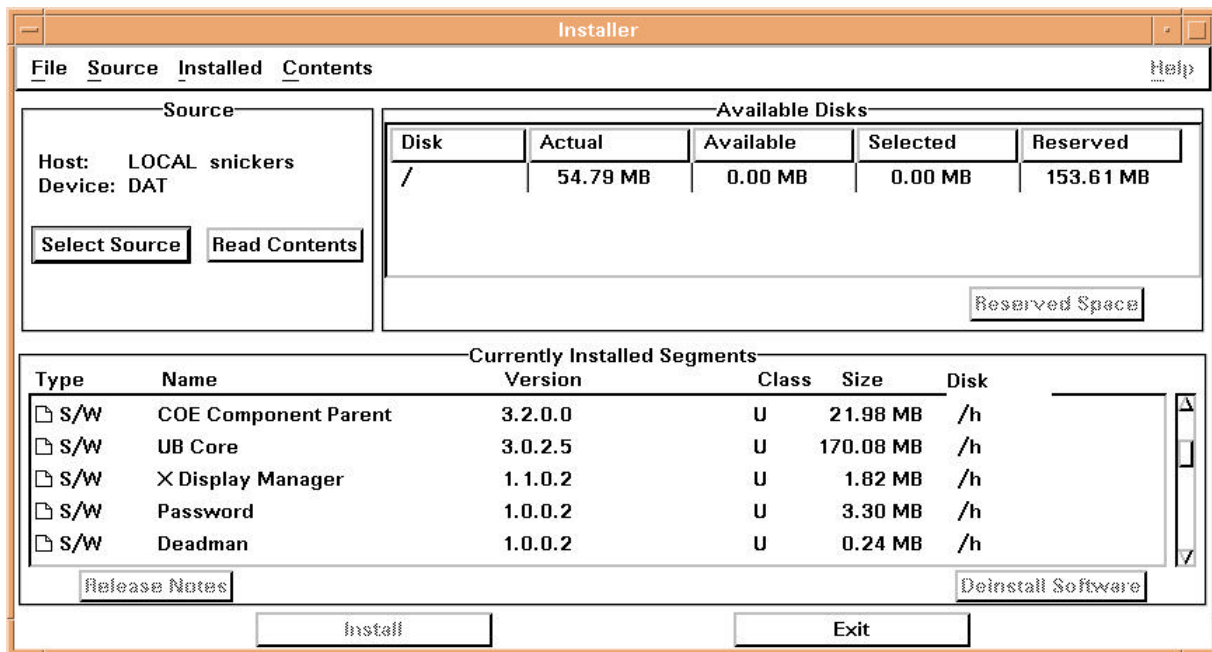


Figure 1. Installer Window

**NOTE:** Ensure that you can see the whole Installer window by clicking on the bottom right edge of the window and dragging the trackball or mouse outward to enlarge the window.

**STEP 5: Check the installation device.** The Source panel displays the name of the host machine and the name of the installation device. The device selection defaults to the DAT drive on the local machine. If you want to select the REMOTE option to install from a remote machine, click on the Select Source button in the Source panel to open the Select Source window (Figure 2); then make necessary changes and click the Ok button to return to the Installer window.

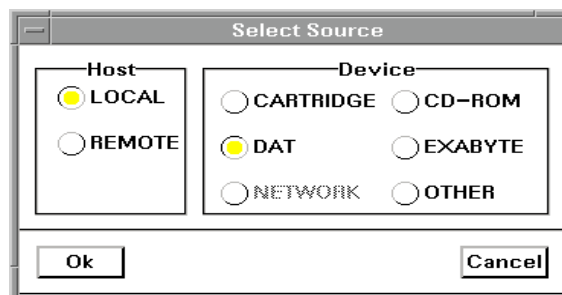
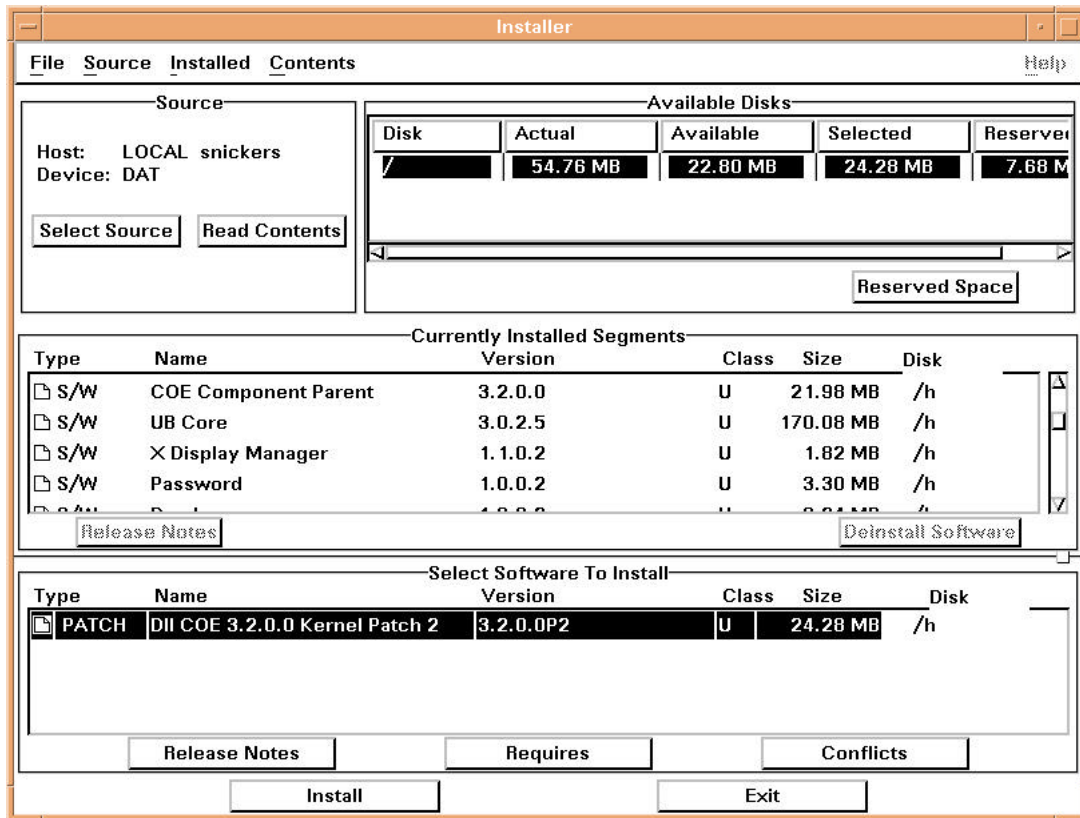


Figure 2. Select Source Window

**STEP 6:**      **Read the table of contents of the DAT.** Click on the Read Contents button in the Source panel. The media is scanned, and the Installer window adds the Select Software To Install panel. This panel lists the DII COE 3.2.0.0 Kernel Patch 2 segment, which is the patch you want to install. Figure 3 shows a sample Installer window with the Select Software To Install panel.

Figure 3. Installer Window with Select Software To Install Panel



**STEP 7:**      **Select the segment that you want to install.** Click on the DII COE 3.2.0.0 Kernel Patch 2 segment in the Select Software To Install panel to select it for installation. The Available Disks panel displays the mounted disk drives on the system and the remaining available disk space as the segment is selected.

**NOTE:** If you wish to view Release Notes and Requires information, continue on to Step 8 and Step 9. If not, go to Step 10.

**STEP 8: View Release Notes for the segment.** Click on the Release Notes button in the Select Software To Install panel to display release notes for the DII COE 3.2.0.0 Kernel Patch 2 segment. Figure 4 shows a sample RELEASE NOTES window.

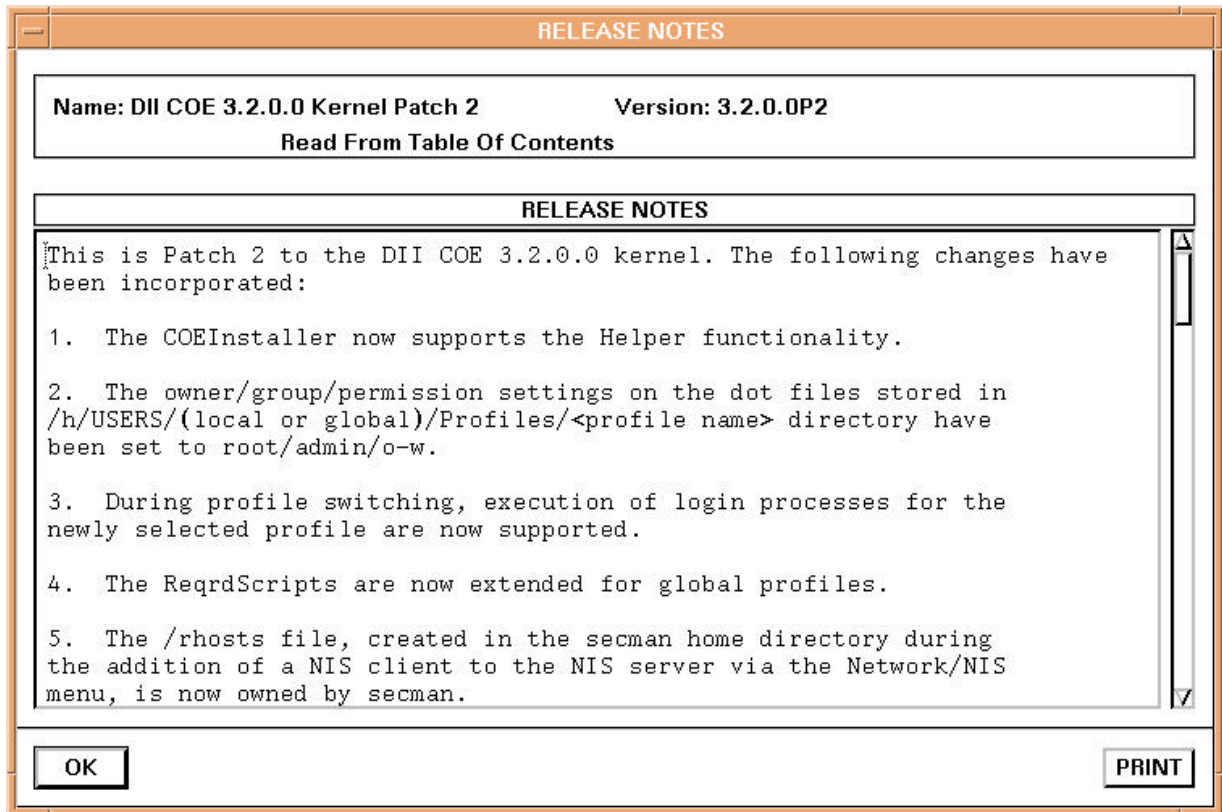


Figure 4. RELEASE NOTES Window

- STEP 9: View segments that need to be installed.** Click on the **Requires** button in the **Select Segment To Install** panel. The **REQUIRED SEGMENTS** window (Figure 5) appears listing the DII COE 3.2.0.0, which needs to be installed before the DII COE 3.2.0.0 Kernel Patch 2 segment.

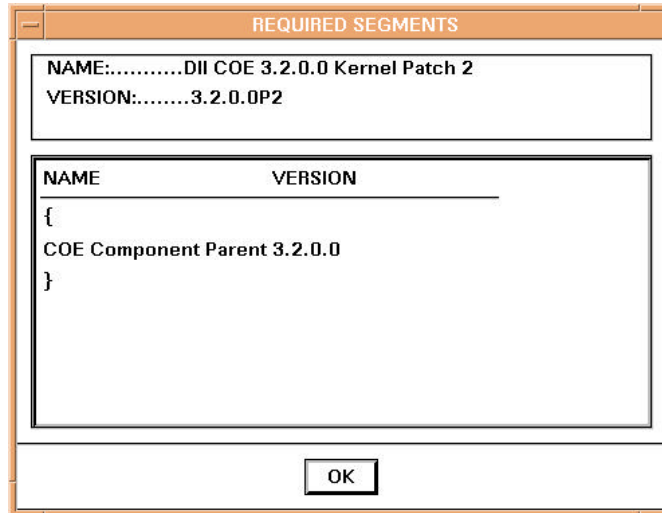


Figure 5. REQUIRED SEGMENTS Window

**NOTE:** You do not need to click on the **Conflicts** button in the **Select Segment To Install** panel because this patch segment has no conflicting segments.

- STEP 10: Begin the installation process for the segment.** Click on the **Install** button once you select the DII COE 3.2.0.0 Kernel Patch 2 segment. The **Installer Status** window appears, which shows the segment you are installing and the size of the segment. This window also shows a **Percent Complete** status bar, which displays the status of the installation.
- STEP 11: Close the Update Security Database window.** The **Update Security Database** window appears. Click the **Close** button in the upper left corner of the window to close it.

- STEP 12: **Enable the Audit Log File Manager.** Once the installation is complete, the `RESPOND TO THE QUESTION` window appears (Figure 6). To enable the Audit Log File Manager, click `Yes`.

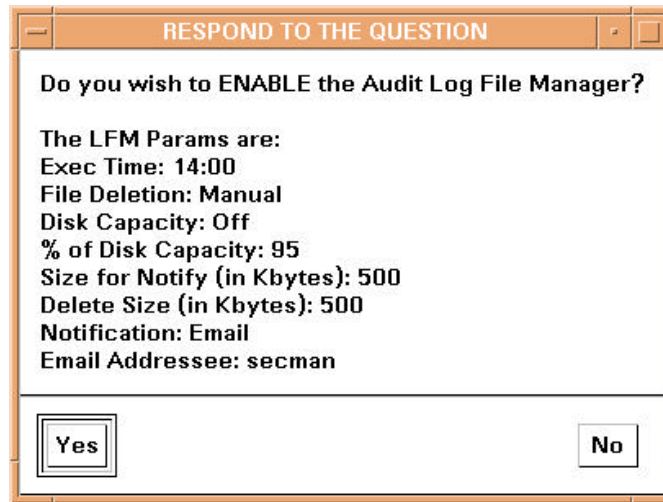


Figure 6. `RESPOND TO THE QUESTION` Window

- STEP 13: **Reboot the system.** Once the installation is complete, another `RESPOND TO THE QUESTION` window appears, asking you to reboot the system. Click on the `Ok` button to reboot the system.
- STEP 14: **Ensure the segment installed correctly.** Once the system reboots, select the `Segment Installer` option from the `Software` pull-down menu. The `Installer` window lists the `DII COE 3.2.0.0 Kernel Patch 2` segment in the `Currently Installed Segments` panel.
- STEP 15: **Exit the Installer window.** Click on the `Exit` button to exit the `Installer` window.

### 4.3 Installation of Upgrades

Not applicable.

### 4.4 Installation Verification

Once the `DII COE Kernel 3.2.0.0 Patch 2` segment is installed, it appears in the `Currently Installed Segments` panel of the `DII COE Installer` window.

## 4.5      **Initializing the Software**

No initialization is required for the DII COE Kernel 3.2.0.0 Patch 2. Once the software has been installed, the user can immediately proceed with normal operations.

## 4.6      **List of Changes and Enhancements**

For a list of changes and enhancements made to the DII COE Kernel 3.2.0.0 Patch 2, see the *DII COE Software Version Description for Kernel Patch 2 Version 3.2.0.0*.

## 4.7      **Important Considerations**

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## 5.      **Notes**

The following acronyms and abbreviations are used in this document:

COE	Common Operating Environment
COTS	Commercial off-the-shelf
DII	Defense Information Infrastructure
DoD	Department of Defense
GOTS	Government off-the-shelf
INRI	Inter-National Research Institute
MB	Megabytes
mm	Millimeter
OSC	OSF Support Center
OSF	Operations Support Facility
RAM	Random Access Memory
SVD	Software Version Description